



1871

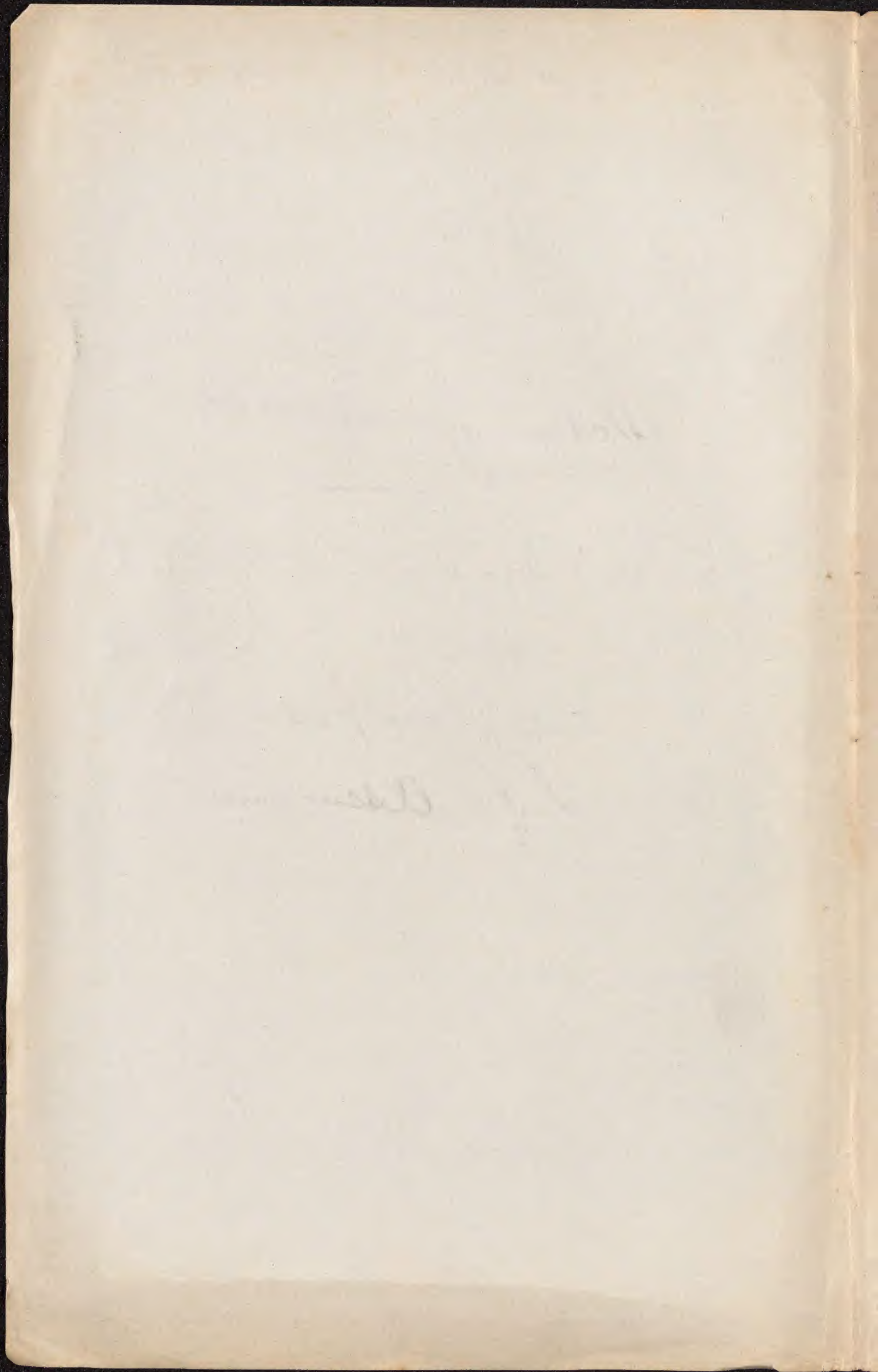
Medical Jurisprudence

Wounds & Injuries - Detection of Blood

Suits for Malpractice

Life Assurance -







we next take up the general subject of

## Wounds & Injuries Mechanically produced.

Wounds involve soln. of continuity.

Best therefore to separate, as other injuries,

Contusions, Concussions

Simple fractures, dislocations, sprains

Wounds are then

Incisions, punctures, lacerations, comp'd fractures,  
Gunshot injuries.

we leave to Surgey the account of  
the peculiarities & history of these.

→ Certain questions concerning them belong  
to med. jurisprudence. 16

~~Questions under legal process may be several.~~

1. Can the appearance of a bruise be produced  
after death?

If much swelling, any change of color,  
or sign of inflammation, the contusion  
must have been produced during life.



wish this connection  
is man  
is shown by experience  
(suffering being inferior  
there) in capability  
my turn out editing

(1)

we are apt to  
the body and a  
in furious it may  
palsy  
atches the sulphur  
which would be  
needle grinding the  
about in the  
table to be to

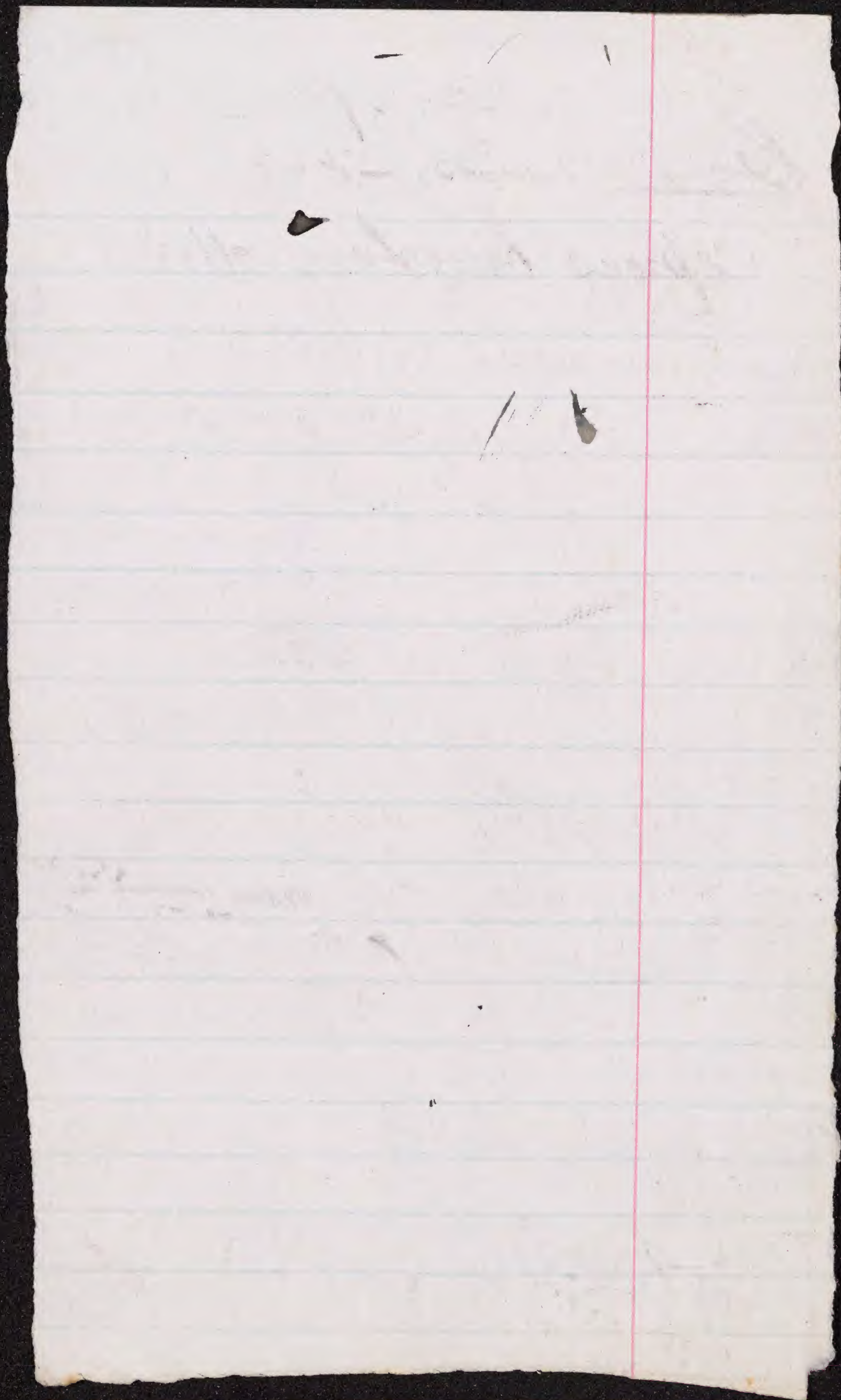


If on cutting into the part, effusion  
of blood is found considerably, probably  
is strong of its having been inflicted during  
life; especially if the true skin is  
discolored through its texture by the  
blood. Bruises made a few minutes  
after death may cause like appear-  
ances.

Deep effusions, <sup>of blood,</sup> under muscles &  
in interior parts, may be produced by  
considerable violence, even several hours after  
death, through rupture of large vessels.

After putrefaction, the dif-  
-ference of disting. bruise marks of  
the living body from those which might  
be fresh marks, is much greater.  
Fractures just after death, & those  
not long before death will have the same  
appearances.







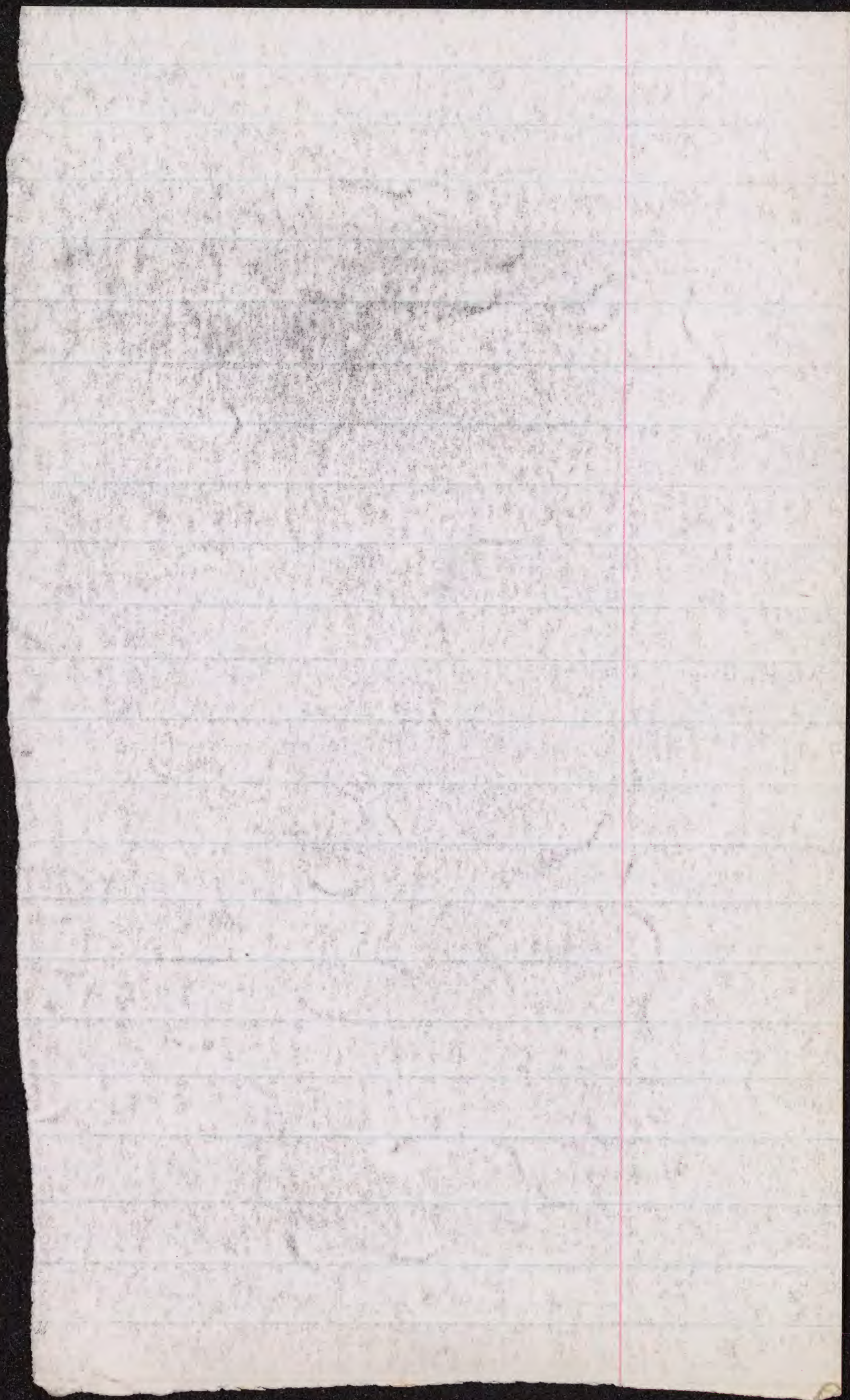
Concerning incised, punctured & <sup>3</sup>  
lacerated wounds, — it is to be said that

Copious hemorrhage affords  
strong presumption of the wound having  
occurred before death; particularly when  
seen in a fresh body.

Lacerated gunshot wound may,  
however, bleed very little.

Experiments of Orfila & Taylor  
have shown, that, incisions made  
immediately after death may resemble  
in appearance, those produced shortly  
before death. But incised wounds  
made long before death show  
changes resulting from inflammation.  
Lacerated wounds are yet more  
difficult to distinguish before & after  
death.







Gunshot wounds are apt to be  
 the most complicated kind. They ~~may~~  
 may ~~State Guiso's account of~~  
 produce ~~assigned in history~~  
~~or~~ almost all other kinds, with contus-  
 -ion, laceration, fracture and hemor-  
 -rhage. Immediate hemorrhage is, it is  
 true, not apt to be considerable, un-  
 -less large vessels are injured.

When a fire-arm is discharged  
 close to the person, the skin is burnt  
 by the flame, and may have in it  
 particles of unconsumed powder.  
 The clothes may also be scorched.

When a bullet lodges in the  
 body, and is found ~~after~~ after  
 death, or extracted during life,  
 it may furnish significant evidence.



ad Moan

Pandarus

64

Values

tem of relief or eleva-  
l Western Hemisphere,

9.

tain in the World  
and what is the prob-

9.

tal and Oceanic cli-  
influence upon vege-  
e and give an example

10.

f Mountains of table-  
ectively upon the dis-

10.

ual amount of rain  
ld and New World  
regions of the two.

9.



The bullet may fit a mould (14)  
owned by the person who fired it.  
Or the wadding may be a frag-  
ment of paper or other material,  
the remainder of which may be  
found in his possession.

Keep such contents of wounds then.  
Examine, also, the aperture or apertures  
made; the round clean smaller  
hole made by an entering ball, and  
the larger, irregular jagged opening  
of its exit. The clothes may also  
show the same, — as well as the

Direction of the ball's approach,  
sometimes of great consequence.  
A bone of course may much di-  
vert the course of a bullet after  
its entrance into the body.



generacy which is  
children of such mar-  
fness, blindness, &c  
results, while a ~~man~~  
ay or in some way de-  
ns a really healthy man-  
is rare. Form  
ly seen which is the

8

bt (except great care  
lead, which is very poisonous,  
duce lead palsy &c.

is applicable to making  
count of breathing the sulphur,  
minute particles of steel  
to the throat & lungs &  
on. Sewer-Cleaning is

8

pure air & gases, as S.H.,  
the lungs; persons become  
bad air & want of sunlight  
ing in mines.



Wadding alone, without (18)  
ball, may kill, if fired very  
close to the body; though this must  
be rare.

While some gunshot wounds  
are fatal at once or very soon,  
from injury of vital parts, very  
many may prove so after variable  
interval, in ways which ~~these~~  
special surgery ~~must~~ consider  
and describe.

The questions common to  
all wounds & mechanical  
injuries involving death or danger of  
death are these:



# 16 med. jumpers -  
23 med. jumpers -  
2nd insanity -  
9 med. ethics -



When death has occurred, & a wound is shown —

1. Was the injury inflicted during life? 16

2. Was it the cause of death?

3. Was it accidental, suicidal, or homicidal?

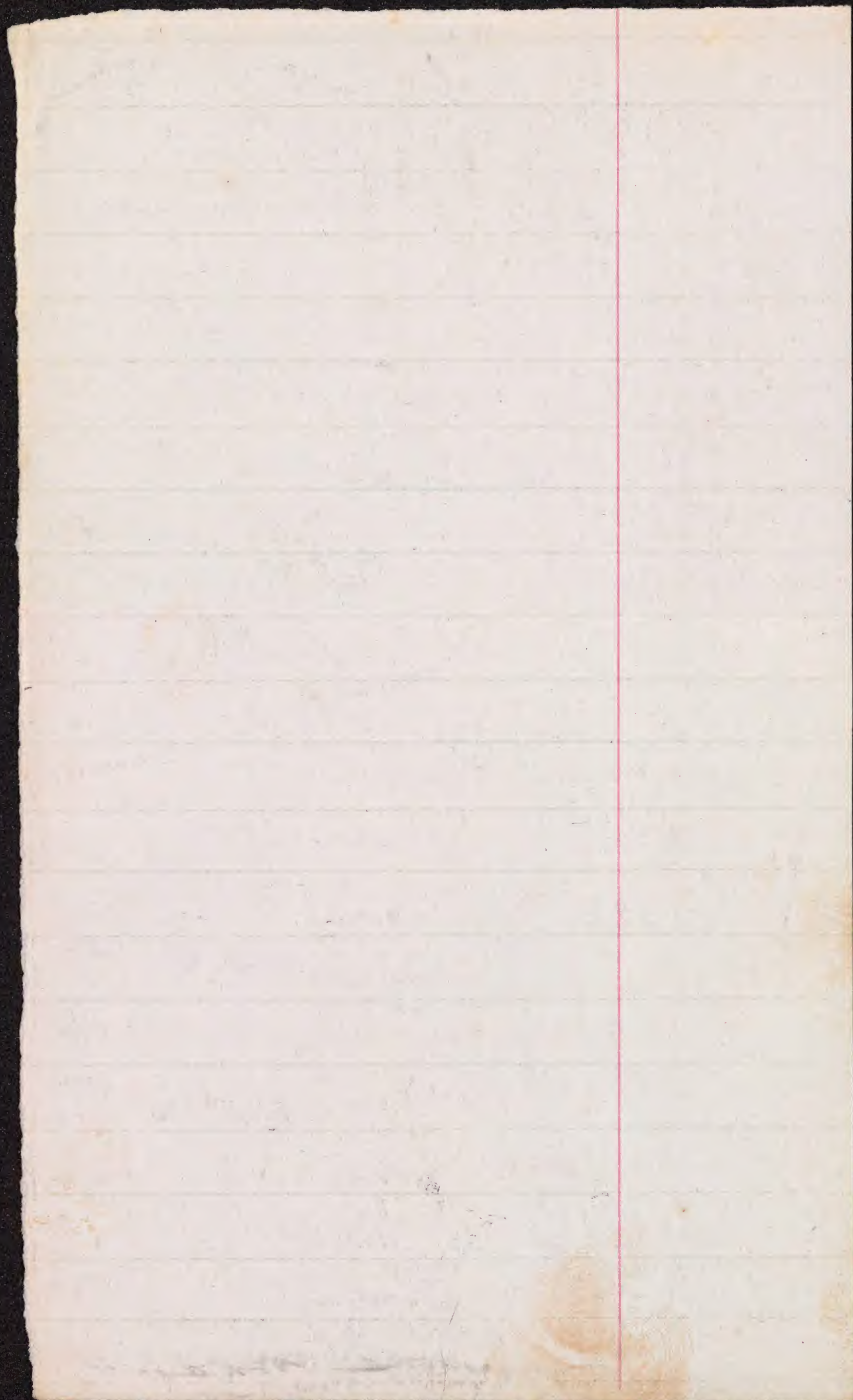
4. If the latter, by whose act?

Something has been said already upon the first question

On the 2<sup>nd</sup>, was the injury the cause of death — no great difficulty usually presents, when a healthy person is struck down and dies at the time or soon after. But complicated cases do occur.

~~→ [1811] p. 227~~







For instance, a boy robbing an (17)  
orchard was struck a moderate  
blow on the head, which caused  
death because his skull was  
extraordinarily thin. A person  
with inguinal hernia may be  
killed by a kick which  
would only bruise another. An  
aneurism existing anywhere, may  
quadruple the danger of an  
ordinary blow or wound. And  
there are many similar examples.  
Lord Hale long ago laid  
down the principle, that "it is  
sufficient to prove that the death of  
the party was accelerated by the  
malicious act of the prisoner,



ies brings on Scrofula  
loss of codine in  
shine ~~so~~ by its ac-  
emical action gives  
as well as plants.

Students



even

although the former laboured & 8  
under a mortal disease at  
the time." However open to  
Doubt it maybe how far  
this Principle would settle  
everything in regard to the res-  
ponsibility in some of the cases  
just referred to — it is  
at least clear that the  
Duty of a professional  
Witness is, so far as pos-  
sible to ascertain and testi-  
fy — first, whether the wound  
or injury proved would suffice  
alone to cause death; — and



... soul, with the  
& wrong.

... Grecian nation is  
... the influence of  
... of Europe. The  
... of Asia. and

2

... of migration has  
... from <sup>Western</sup> Asia  
... and from thence to

9

... to Europe in  
... is the place where  
... was strong, but  
... will exercise those

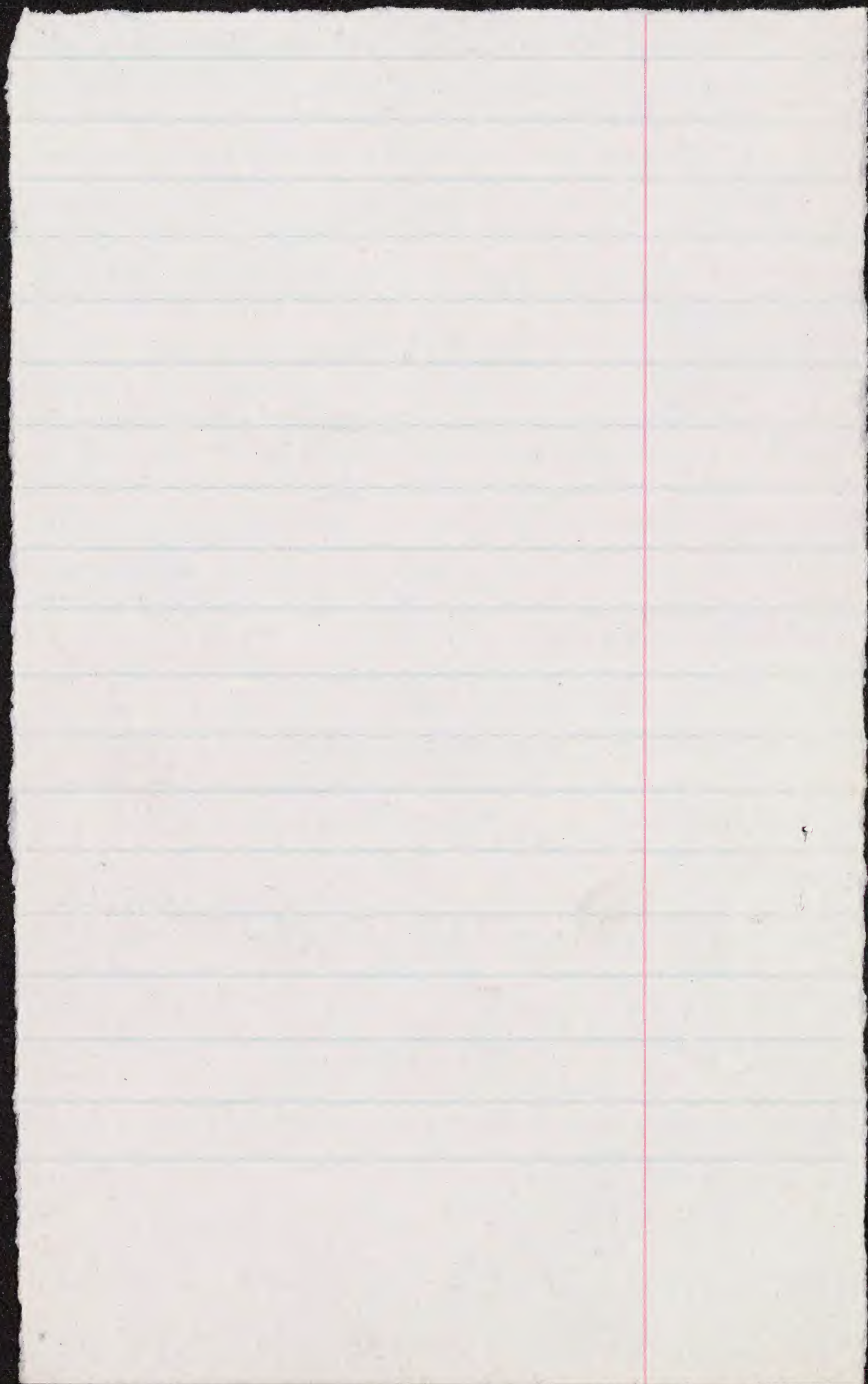
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secondly, whether, in the (19)  
particular circumstance  
of the case in hand,  
it did or did not  
accelerate <sup>death</sup> or make certain  
its occurrence which before  
was doubtful.

Where a considerable  
time elapses after the  
injury before death  
takes place, the dif-  
ficulty may be increased much.  
E.g. - Stokes - Fisk case, (malpractice charged)  
& Landis - Carnith case (ditto, over-probing).







(20)  
[In parenthesis, I must ~~ask~~  
be allowed to relieve my mind  
by expressing the not medical  
but general common sense con-  
-viction, strongly entertained, that  
our laws suffer under a most  
inequitable defect, in that they  
make so much to depend on the  
actual death of the victim of  
a homicidal assault. It is in-  
deed preposterous that, as in a  
case of a U. S. Revenue Inspec-  
tor not long since, men  
convicted of planning an approach  
to an unarmed man in a store,



most civilized Country  
important part in Hb.

[A]

The general line of mi-  
tion has been from E.  
was the 1<sup>st</sup> to cross the  
late America

X.

Asia is the cradle of a  
first passes his infan-  
school where he is tra-  
America is where he  
and activeness.



placing a pistol to his (2)  
back, & discharging the bullet  
into his body, — should  
be dealt with and punished  
for anything less than murder,  
because somehow or other  
the victim recovered instead of  
dying as they expected him  
to do. But this, of course, is  
out of our immediate track.

The Law <sup>at present</sup> does make this  
difference <sup>in the</sup> & leads often  
to great complications in purged  
testimony in homicidal cases.



he is does not  
and these become  
proportion his  
and he becomes

But on the cont  
the Frigid gone  
hard for his subse  
very little small  
not time for any  
Thus remains at  
humanity. The

the "Golden Rule"  
is enabled to obt  
<sup>out</sup> very much Toil, as  
then his mind also  
it is here we find  
Man's superior  
of other organized



Questions occur, <sup>on the general subject of</sup> ~~the~~ <sup>22</sup> ~~fatal~~ <sup>fatal</sup> wounds, —  
these:

As to the place where the body  
was found.

The Nature of the wound

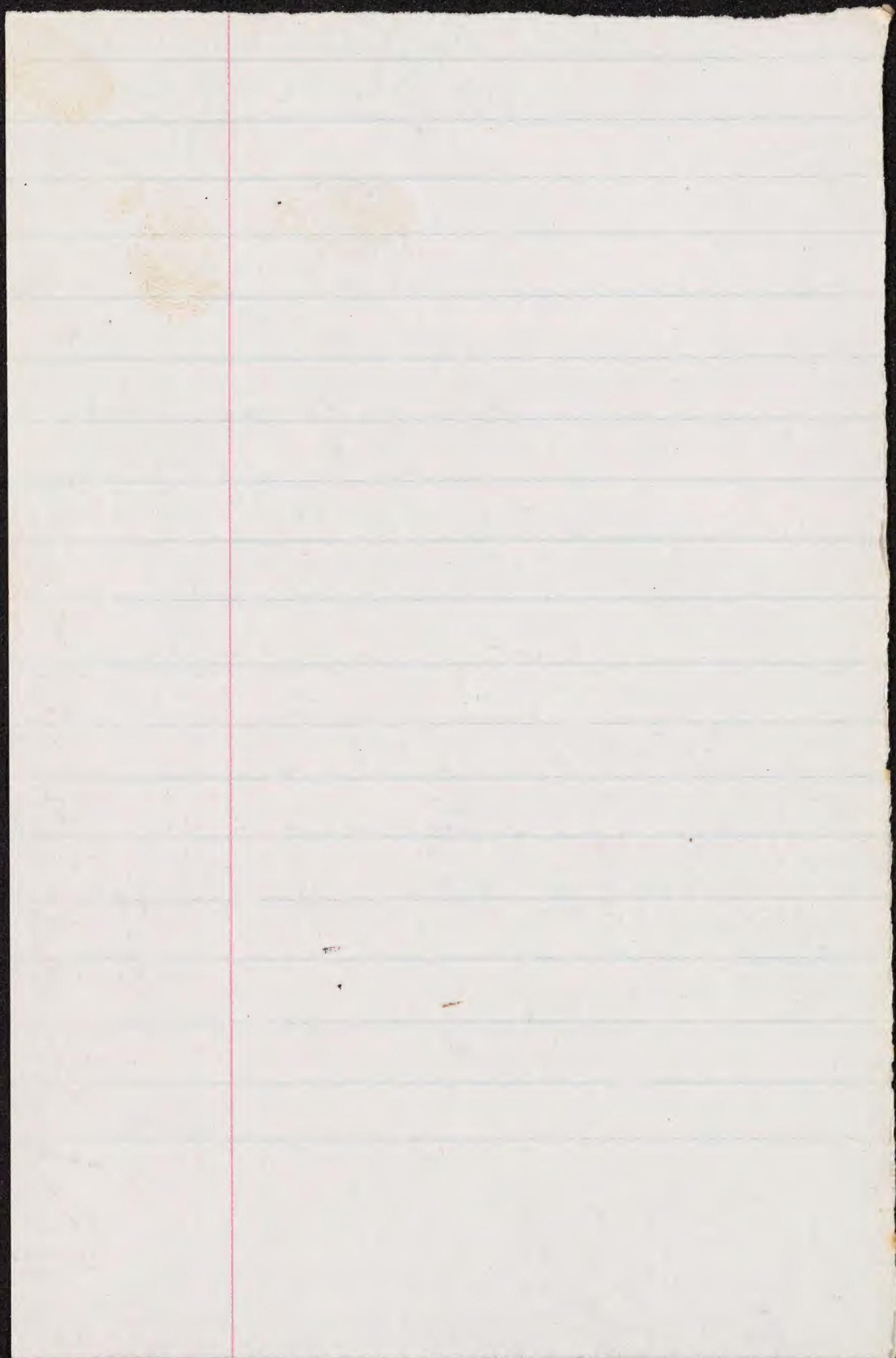
Situation of it; could the  
individual have inflicted it on  
himself?

Extent of the wound —

(Throat — Suicidal sometimes very extensive.  
Expanse, — about cutting vertebral artery or arteries.)  
Its Direction —

Number of wounds — alike  
or different — How were they probably or certainly  
made?







various circumstantial (23)

evidence may prove <sup>to be</sup> of <sup>the</sup> utmost,  
perhaps decisive importance  
Thus, a woman was <sup>once</sup> found dead &  
laid with her throat cut.  
On her left hand was found  
~~the~~ a <sup>distinct</sup> mark of the left  
hand of another; proving that  
it could not be suicide.

Is the wound, shown to exist,  
dangerous to life?

<sup>again?</sup> Of many wounds, which was  
mortal? Different persons may  
have given the different wounds.  
How long did the injured person  
survive?



try, and she took a very  
history.

migration of the Popula-  
Europe, the European  
Atlantic and popu-

2

civilisation where man  
ancy, Europe is the  
ained in his youth,  
passes his life in work

10-

Pandarus



When was the wound inflicted?

~~things which~~ E

Consideration of these questions the manner of their investigation, or they affect the different parts of the body, would take long — I must refer you now to <sup>your</sup> future <sup>opportunities for the</sup> study upon them. Our time is ~~very~~ short, — and, in the same introductory way other topics are yet to be glanced at. I must ~~take time~~ refer for a short space only to one matter, — the detection of marks of human blood.



toil for his subsistence,  
& lazy, and in  
moral nature decreases  
a slave to his passions  
vary the man of  
being forced to work  
istence, and <sup>receiving</sup> having  
pay for labor, has  
other pursuit and  
a low scale of  
the temperate regions.  
man" here man  
tain a livelihood with  
and is enabled to  
to higher things;  
id the true man-  
ity differs from that  
beings, in his  
and is endowed

10



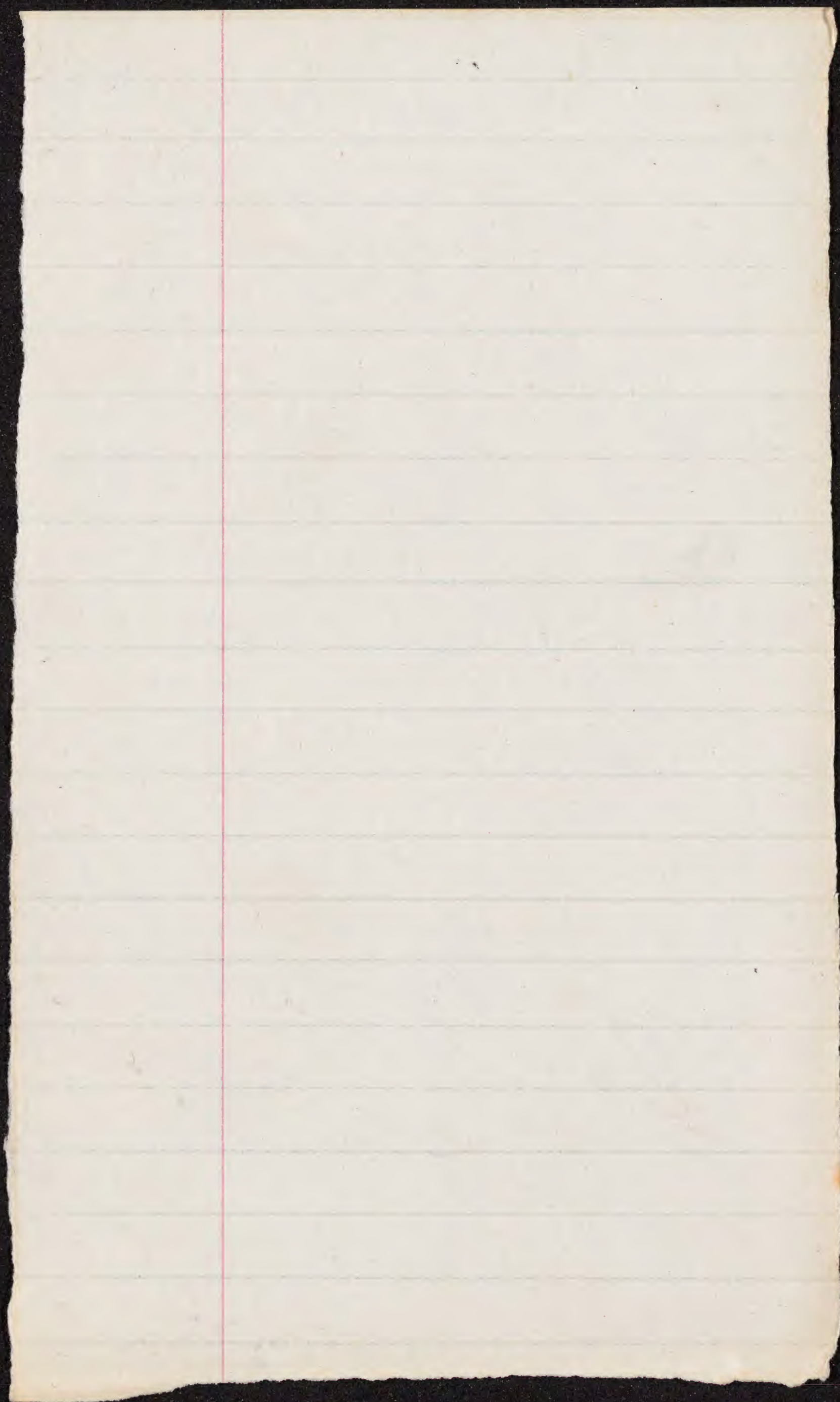
## Detection of blood. ~

On clothing, on knives, <sup>(25)</sup>  
or  
hands, on floors or furniture,  
and sometimes in water or other liquids,  
we may be called upon to say  
whether spots, red or brown, old  
or <sup>or reddish hues or stains</sup> fresh, are or are not of  
human blood.

When recently shed, in con-  
siderable amount, its appearance and  
qualities are characteristic. In  
very small portions, or long dried and  
exposed, it is not easy to distinguish  
with certainty.

Lamina, may be made of the  
Fibrin, — Serum, — Coloring matter,  
Red corpuscles — crystals formed in blood,  
and Sublimates obtained from it by heat.







(26)

Fibrin, under the microscope  
has a peculiar look. "Its  
irregular grouping, variable thickness,  
clubbed loops, and complete ab-  
sence of texture of any kind,"  
although fibrillary,  
form a highly characteristic combina-  
-tion of appearances. (Evy).

Serum of blood is known by its  
albumen; <sup>coagulates at about 140° Fahr. to 160°</sup> at the heat of boiling oil,  
350°, ~~Wag.~~ alb. becomes soluble  
in water. Water discolored by a  
stain supposed to be blood may be heated  
by <sup>means of</sup> boiling oil for an hour, in a  
strongly sealed tube. (Bloxam) Then it may be  
tested with  $\text{NO}_5$ ,  $\text{H}_2\text{Cl}_2$ , &  $\text{K}_2\text{FeCl}_4$ .  
each of which should give a white precipitate.



was the place where  
the place where  
times, the place  
of the greatest  
an ever saw.  
le me might call  
the part assigned  
all man, I was  
man, reached his  
most civilized  
the globe. The part  
in the full grown  
works; he comes over  
ed.

Omnicron.

10

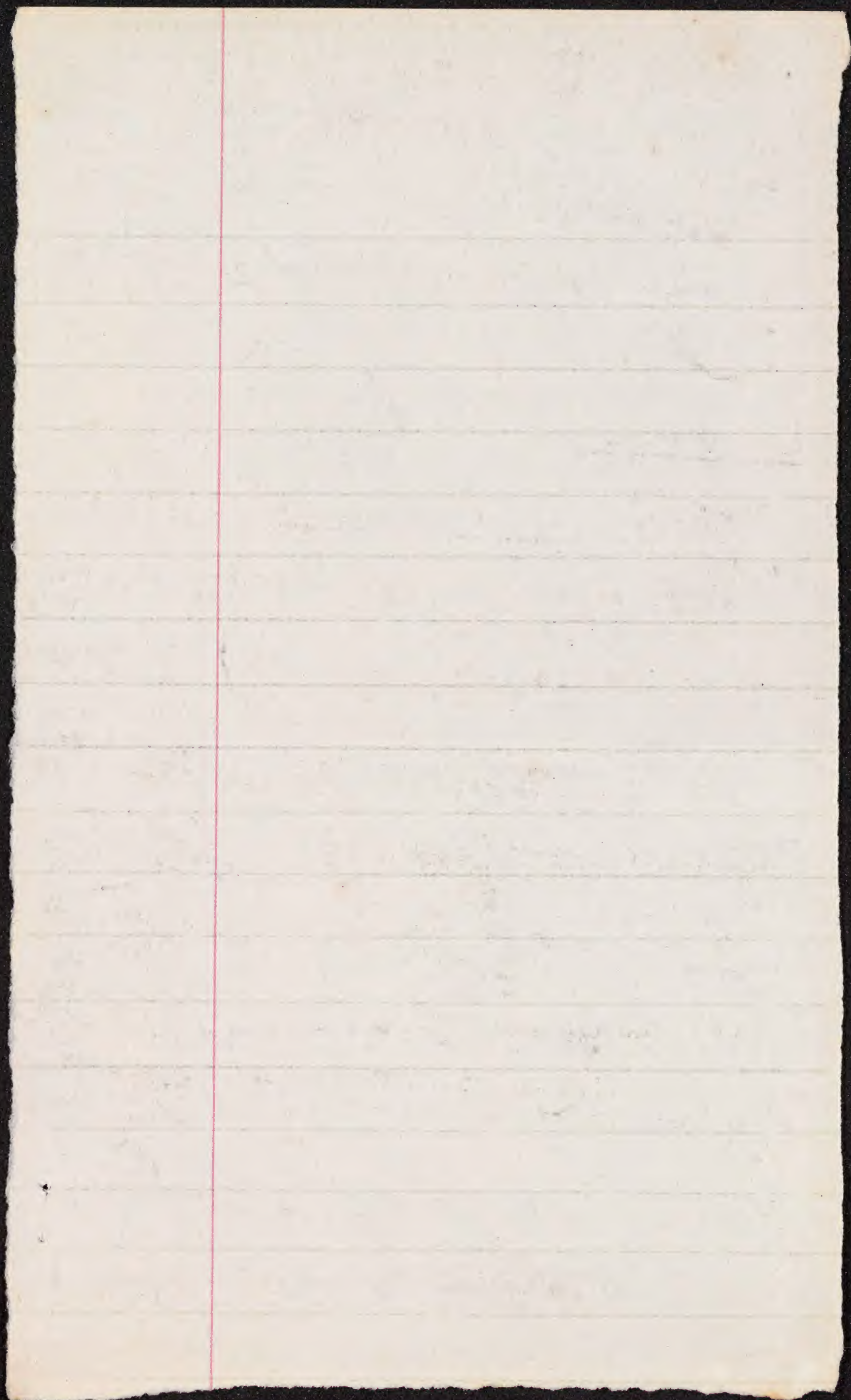


It is almost impossible that <sup>(27)</sup>

Any printed fabric can have at the  
<sup>without being blood-stained, but from other sources,</sup>  
same time, albumen in it on it, and  
<sup>also</sup> the ~~same~~ <sup>same</sup> color of blood. The  
detection of albumen in a spot ~~with~~  
with such a color in the hue being  
most evident in water stained by  
it, — is therefore very nearly con-  
-clusive that it is blood.

The coloring matter of recent  
blood-stains makes with cold water  
a vermilion-red solution. Boiling  
this makes it of a dirty slate color,  
& coagulates the albumen of the  
serum present. If then, the coagulum  
be dried, and boiled in solution of  
potassa, it forms a solution which







is dark green by reflected, (28)  
and red by transmitted light.

Liquor ammoniac does not change  
its color. Infusion or tinct.

Galls gives with it a red pre-  
cipitate. No other red solution

has these characteristics. Flower

and leaf or root-colored infusions  
become green or violet with Liq. am-  
moniac; the same test makes

cochineal crimson. Sulphocyanide

of iron makes a red sol. which gives  
a white precip. with Liq. ammoniac.

Potassium permang. sol. is pink-red,  
but becomes blue with ammonia. And  
none of these are changed by heat.



At  
Callimus.

(forever at Haverford.)



Red col. matter containing (29  
salts of iron become blue with  
infus. or tinct. of galls.

There are ~~many~~ other delicate  
tests for blood.

Schönbein's, improved by Day  
and Taylor, is, the use together of  
tinct. guaiacum & ethereal sol.  
of perox. of hydrogen, — commonly  
called OXONISED ether. Dr. Til-  
bury Fox (Tanned Clin. Med.) says it is not  
oxonised, but autoxonised ether.  
That is a <sup>matter of theory.</sup>  
~~question of theory~~  
However, it makes ~~by exposure of~~ <sup>a</sup> ~~rich~~  
a rich sapphire-blue with a blood sol-  
ution. It does better with a weak solution  
than with a strong one.



Examination of

1

Compare the general system  
in the Eastern & Western

11

What is the highest mountain  
How high is it? What  
depth of the Oceans?

111

Compare the Oceanic &  
together, as to their  
& animal life, and  
each.

IV

What is the influence  
and of deserts, respectively  
of rain.

V

State the annual area

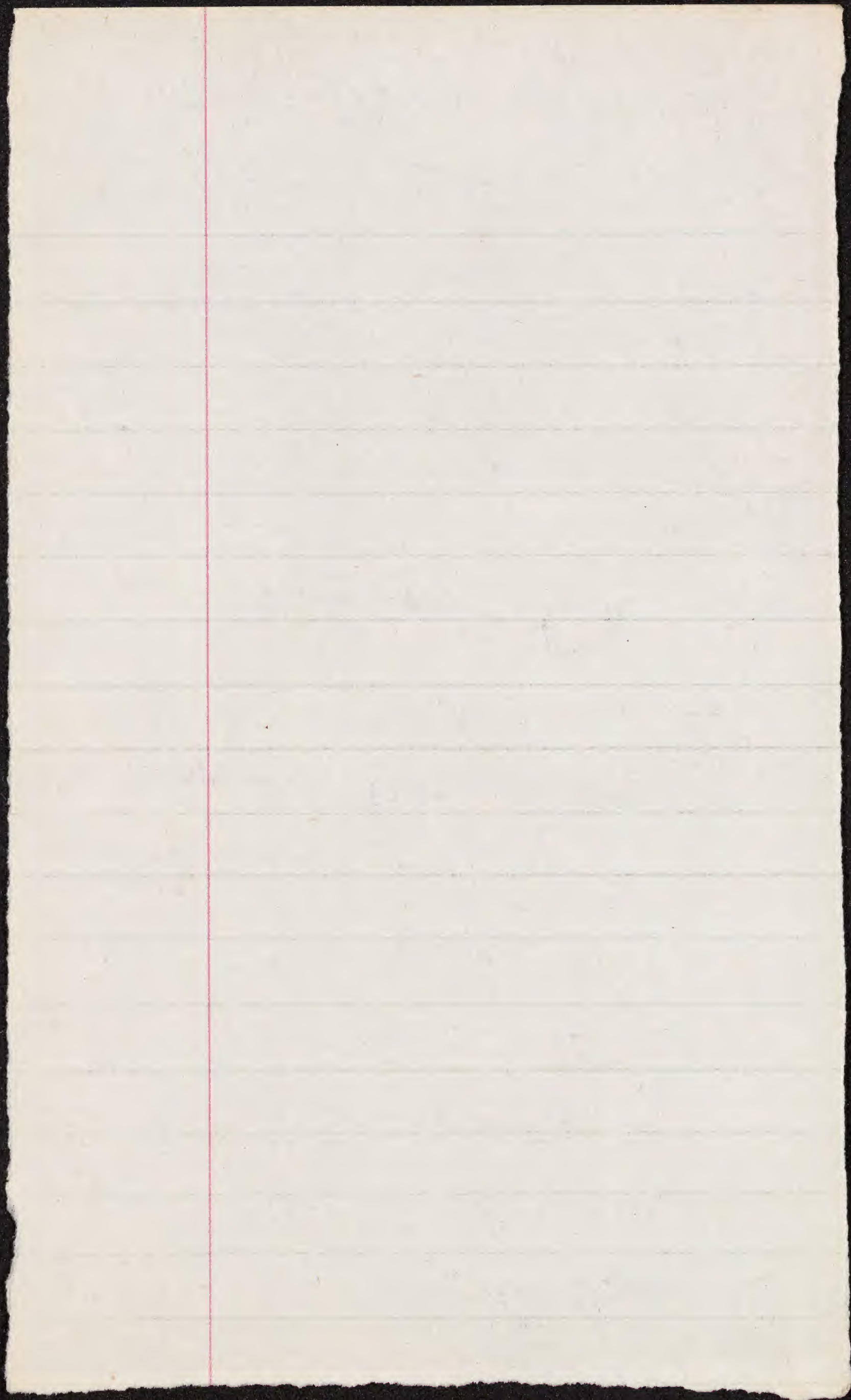


(30)

Black currant-juice stains a  
good deal like blood; but it  
is not acted upon in the way just  
mentioned by the ethereal ~~guaiacum~~  
test. Ink stains become blue  
with guaiacum; so do rust stains  
from action of vinegar or lemon juice  
on iron; but they do this without  
the prepared ether; and blood  
will not.

All these means, then, will  
show whether a spot or stain,  
or colored liquid, contains blood  
or not; but they will not show  
what blood; human or animal.  
The microscope confirms the  
decision that it is blood, by showing







featuring the disk-like blood (31)  
corpuscles; and it also does more,  
A moderate magnifying power  
will be enough to detect the  
corpuscles. In all mammalian  
animals, i.e. for inst. the domestic  
quadrupeds, dog, horse, ox,  
sheep, &c, — they are, as in  
man, circular disks; except  
the camel, in which they are  
elliptical. In fishes, reptiles  
and birds, they are oval.  
This is important.

Between the blood corpuscles  
of man and the common domestic  
animals, there is no determinable



Europe to gradually  
as the seat of Human  
The part of Europe  
man in his highest  
her crowded shores  
quartered whither to  
to outpour into prop  
rate America her  
races and the part  
receives that popula  
of man to his high  
Sphere.

Apollo.



(32)

Difference except in size.  
In man they average  $\frac{1}{3200}$  of  
an inch; sometimes  $\frac{1}{2000}$ , occasionally  
 $\frac{1}{4000}$ , as extremes. In the animals,  
from  $\frac{1}{3540}$  to less than  $\frac{1}{6300}$ ,  
~~with~~ averages, — no doubt with  
further extremes. Moreover, the  
liquid medium may make them  
expand or contract. Dr Eury  
therefore concludes that "It is not  
to be expected that the most skilful  
and practised person should be able  
to distinguish human blood from  
that of other animals." Dr Taylor  
says that "evidence based upon  
such varying averages must be treated  
as speculative and unsafe." Wharton  
& Stille tell us that the corpuscles are so



10  
of nature. ~~There~~  
<sup>the</sup> development

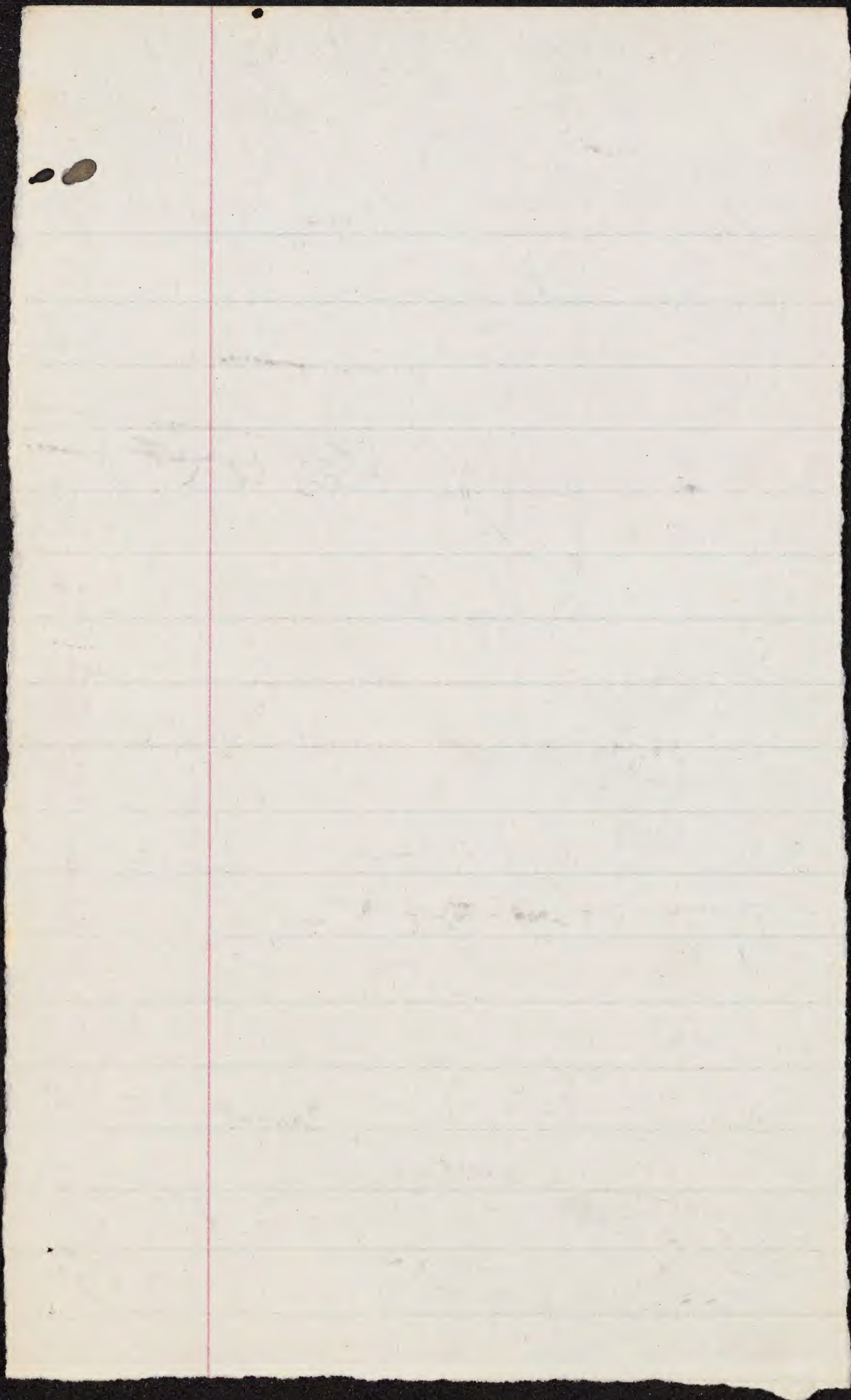
country where he  
gth ~~for~~ he is now  
at maturity  
for himself &

Satyr.



nearly alike, that "practically" <sup>(33)</sup>  
no distinction can be made." In  
1860, however, we find that in  
a capital case in this city,  
Prof. Leidy of the University  
testified from microsc. exam.  
of a specimen of blood asserted to  
be that of a chicken, that this  
was false, and that it was  
human blood. And, within a  
~~few months~~ <sup>few years</sup>, ~~Dr. Joseph E. Richardson~~  
~~son, an able and industrious mer-~~  
~~chant of this city, armed with~~  
~~a powerful microscope, has pub-~~  
~~lished the assertion that, with~~  
~~very high powers, magnifies for~~  
~~example 1200 or 2500 diameters,~~







Dr. J. E. Richardson affirms certainty  
of distinction of size, measurable with  
microscope. magnif 1200 diam., between  
human red corpuscles. Those of pig, cat,  
horse, ox, sheep, goat and (red) deer.  
~~Taylor~~, Casper, Virchow & other European  
experts have concluded not insisting on certainty  
of diagnosis of human red corpuscles <sup>from those of other mammals</sup>. Dr. Wood-  
ward (Hays' Journal, Jan. 75) points out that  
dog's red corpuscles are not distinguishable. Bullen's  
asserts same of those of apes & monkeys; as well  
as of rabbit, Guinea pig, seal, otter, porpoise &  
Kangaroo (also, capy-  
bara & armadillo).



In Rubinstein murder  
case, 1876, Prof. Eaton testified  
opinion that certain marks were  
of human blood



the differences which with (34)  
low powers seem so insignificant  
may be made <sup>to the eye</sup> as great <sup>the difference</sup> as be-  
tween  $5/7$  and  $1/2$  an inch, and  
thus, to an expert ~~and~~ ~~decisive~~  
decisive. To such experts  
I think, evidence of ~~this~~ ~~or~~  
kind must, for a time at  
least, be left.

1874-5 See  
Am. Med. Times &  
Annals on Med. Jurispr.

Blood-crystals, of  
<sup>hemine</sup> hematochrome or hematochromine  
are regarded by Virchow as  
"one of the surest tests." They  
may be found (by aid of <sup>the</sup> microscope)  
in blood stains <sup>even</sup> of long standing.  
over



(34<sup>th</sup>)

Leichman's test for blood by  
formation of haemin crystals is as follows:

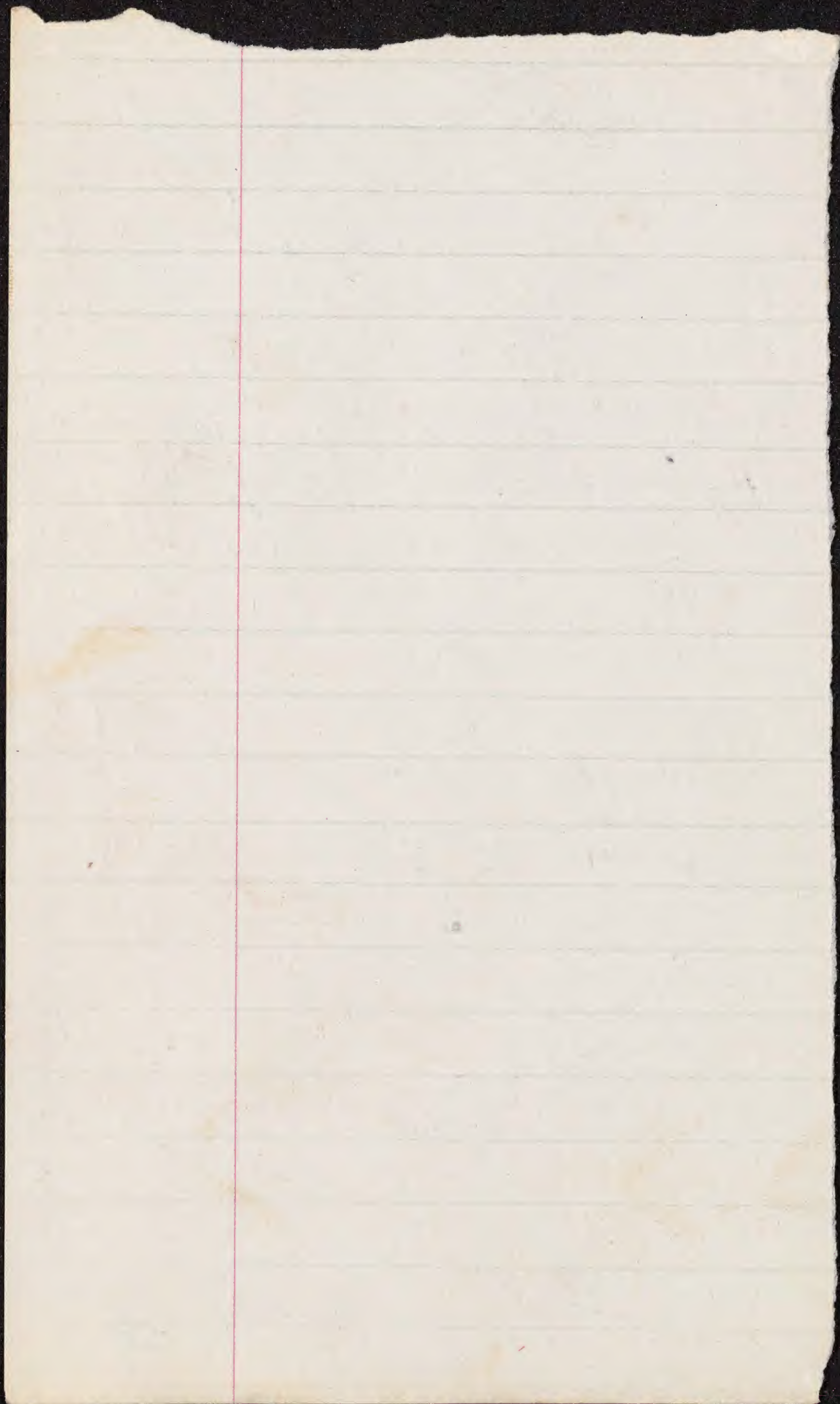
Put some of the dried residue on a watch-glass or microscope-slide. Rub with it a very small amount of ammonium chloride or common salt — add to the mixture a drop of (soln. of) glacial acetic acid — and warm, until bubbles form under the covering glass, — showing that the acetic acid has begun to boil. Then let it cool, — and crystals of haemin will be seen under the microscope.



Sublimates may be obtained by heating blood stains, on porcelain by a spirit-lamp; a slip of flat glass, or a <sup>concave</sup> watchglass, being held over the porcelain. While the heat is but moderate, there ought to be a pure white sublimate deposited on the glass. When the heat becomes strong, then, a blood-red sublimate.

By heating the scrapings of a stain <sup>found</sup> on steel or iron, in a (reduction) tube, if the stain be blood, the presence of animal matter may be made known by ammonia being given off.







The addition of SO<sub>3</sub> (36)  
has been proposed (by Barruel)  
to distinguish the blood of one  
animal from another, & man  
from the rest, by the  
peculiar odor given off  
from each under the action  
of that acid. But  
experiments have shown  
that this is unreliable.

Sorby and Browning  
have shown that acid in  
detecting blood stains is  
one of the many ~~and~~ applied.



by our history, Asia  
Christ was born, &  
he taught his doctrine  
where ~~the~~ performed  
miracles which on  
Asia is the cradle  
it of mankind, &  
to Europe <sup>is</sup> to educate  
in Europe where a  
highest point, <sup>it is</sup> the  
place on the "whole"  
of America is received  
man. Here he was  
already civilized



cations of that wonderful (37

instrument - the Spectroscope.

Two black absorption bands  
in the upper part of the green section of the spectrum  
are shown by blood solutions

of a certain strength. The

Delicacy of Management is  
such that here also the  
skill of special experts  
must be necessary; al-  
though it is right and desir-  
able for all who may become  
professional witnesses to be  
acquainted with the principle  
involved and applied.

[1870, 20 minutes, about, to spare in an hour.]

Supply, only hanging, drowning, burns & deaths.

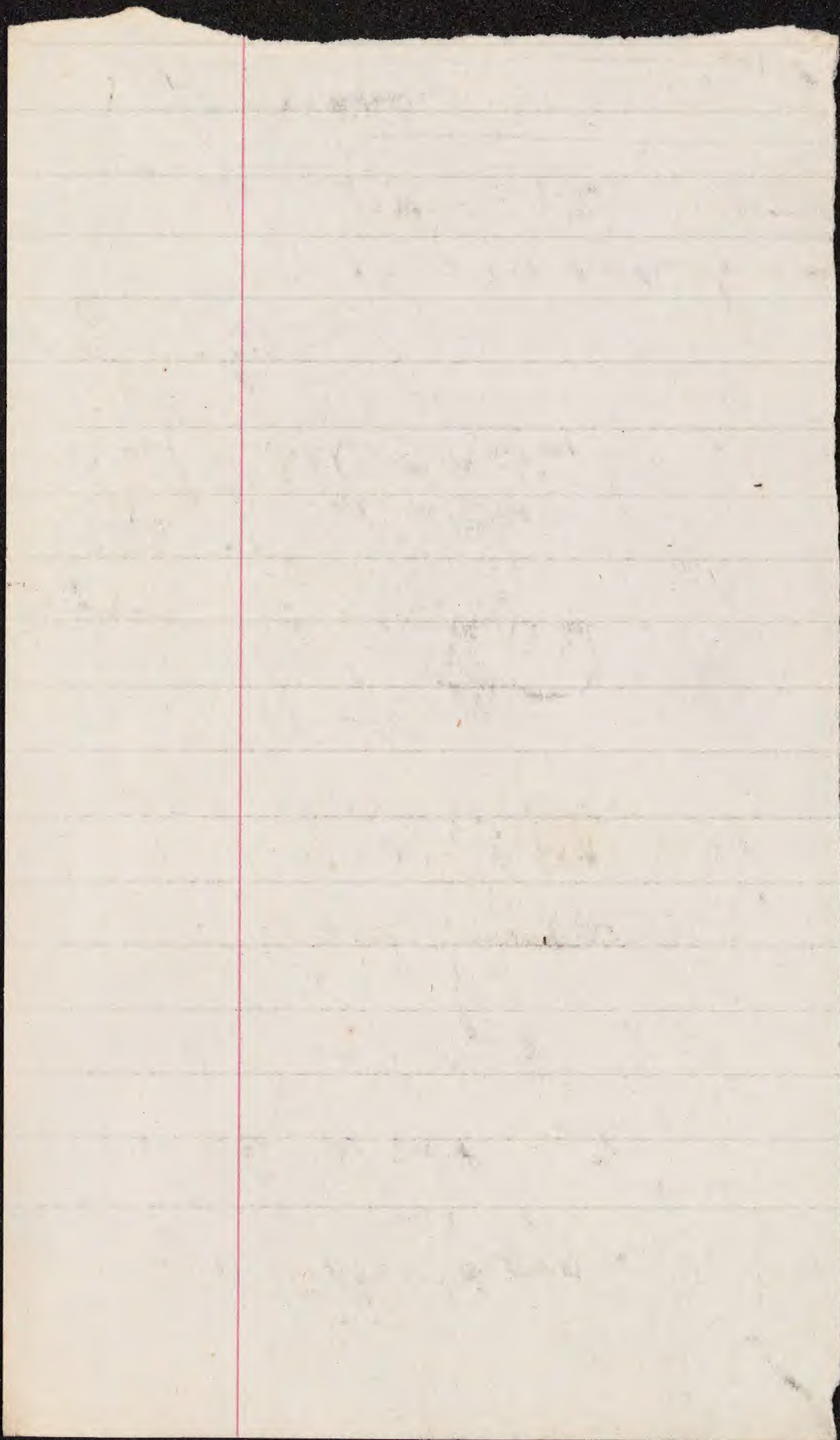
Schoppin case

1871

Suits for malpractice?

See Phila. Med. Times, about Reese's case, 1870.







NEW TEST FOR BLOOD-STAINS.—J. W. Gunning (*Journal of Applied Chemistry*) has discovered that acetate of zinc will precipitate the coloring matter of blood from solutions. The flocculent precipitate must be washed by decantation, and left to evaporate and dry on a watch-glass, and, if blood has been present, the microscope will reveal delicate hæmin crystals.



ing which, however, the Commissioners express the opinion that there are still large numbers of insane persons in England kept under private care and deprived of the benefits of periodical inspection. There still exists, it is stated, an insufficiency of accommodation for the insane of all classes, but especially of paupers.



DETECTION OF BLOOD-STAINS. — Dr. Edward S. Wood, in the *Boston Medical and Surgical Journal* for January 2, reports that *Fres. Zeitsch. f. Anal. Chem.* (1872, ii. p. 244) contains a note from Dr. Helwig, contradicting a statement made in the *Chem. Centralb.*, 1871, p. 37, that a solution of blood-pigment in iodide of potassium cannot be used for the production of blood-crystals, but only for spectroscopic examinations. It has long been known that a solution of iodide of potassium will extract from clothing the slightest trace of blood-coloring matter, it being possible to obtain a solution suitable for testing even when the clothing has been washed and the stain is very old. In the present instance Dr. Helwig exhibited a specimen of hæmin-crystals which he had obtained by treating a piece of linen upon which a blood-stain had existed for sixteen years, with a solution of iodide of potassium. The residue left after the evaporation of one drop



acute inflammation or 'tonsillitis,' both of which require other appropriate treatment."

TO KILL LICE (*Edinburgh Medical Journal*, Nov. 1872).—All kinds of lice and their nits may be got rid of, *tuto, cito, et jucunde*, by washing with a simple decoction of stavesacre (*Delphinium staphisagria*), or with a lotion made with the bruised seeds in vinegar, or with the tincture, or by rubbing in a salve made with the seeds and four times their weight of lard very carefully beaten together. The acetic solution and the tincture are the cleanliest and most agreeable preparations, but all are equally efficacious in destroying both the creatures and their eggs, and even in relieving the intolerable itching which their casual presence leaves behind on many sensitive skins. The alkaloid delphinia may be also employed, but possesses no advantage, except in the preparation of an ointment, when for any reason that form of application should be preferred.



upon a glass slide gave beautiful hæmin-crystals upon the application of Teichmann's test, when the remainder of the solution, examined by the spectroscope, gave an absolutely negative result.

Teichmann's test, the ordinary test for hæmin-crystals, is performed by rubbing upon the dried residue in a watch-glass or on a microscope-slide a very small quantity of ammoniac chloride or common salt, adding to the mixture a drop of glacial acetic acid, and warming until bubbles form under the covering glass, showing that the boiling-point of the acetic acid has been reached. Upon cooling, crystals of hæmin can be detected by the microscope.

In the same journal (1872, i. p. 29) we find mentioned by H. Struve an additional test for blood-pigment, which is applicable to the testing of both urine and clothing-stains for blood. This test is based upon the precipitation of hæmatin from an acetic acid solution by tannic acid as tannate of hæmatin, and may be performed in the following way. To the urine or any other liquid suspected to contain hæmatin is added a little ammonia-water or potassic hydrate, then a solution of tannic acid, and finally acetic acid, to distinctly acid reaction. If hæmatin be present, a reddish-brown precipitate, tannate of hæmatin, is formed, which quickly settles and can be very easily washed and collected on a filter. This precipitate, after drying, gives a residue with which we can obtain hæmin-crystals by performing Teichmann's test. This test is far superior to Heller's test for blood in the urine, in which the hæmatin is mechanically carried down with the earthy phosphates, after the addition of ammoniac or potassic hydrate. By the above method the author claims to have detected the presence of blood when all other reactions have failed; for instance, in urine when he could not detect the albumen by any of the ordinary tests. In 20 cc. of urine to which 0.023 per cent. of blood was added, a precipitate was obtained which permitted numerous examinations for hæmin-crystals to be made by Teichmann's test.



that they find the system successful, rapid, and permanent in its effects; which opinion confirms those of earlier date, given by commissions appointed in France, Belgium, Spain, etc.

Eight patients, severely affected with stuttering, were submitted, under the observation of the commissioners, to the system of M. Chervin. They varied in age from ten to twenty-nine years, and none of them could speak without stammering to an extent most distressing to themselves and to those who heard and saw them. In some cases the act of speaking was accompanied with convulsive movements of the mouth and eyes; in others, with spasmodic respiratory movements. Some had stammered from their infancy; in others the defect had been caused by a shock to the nervous system. Ten days after they had been placed under M. Chervin's treatment they were seen by the commissioners, and each of them could then speak distinctly, without stammering or hesitation; and on the 28th they were pronounced cured, speaking then with natural ease and rapidity.

The system is as follows. All mechanical contrivances are discarded; but he teaches the patient, by means of a large number of exercises, gradually to pronounce, with distinctness, vowels, consonants, syllables, and sentences. He pays great attention to the act of respiration, which he seeks to regulate. He teaches his patients to take at certain intervals a slow but normal inspiration, which is succeeded by an even, continuous, and loud expiration, during which pronunciation is effected. The course of treatment occupies twenty days, the time being divided into three periods. During the first the patient is restricted to complete silence, so that the old habit may be broken; during the second period the patient is taught to speak slowly and deliberately; and during the third period he acquires the practice of speaking fluently and without clipping the words. This method is stated to have succeeded in the most difficult cases, and the good results are said to be permanent; but the



(1)  
Philada.

Jan. 1. 1873

Having requested Dr \_\_\_\_\_ to  
attend me (or my wife or child) on account  
of a (broken thigh, leg, arm, &c), I agree  
and promise that I will ~~place~~ confidence  
in his (or her) skill and attention, and  
will not under any circumstances charge  
him (or her) with, or sue him (or her) for,  
malpractice in the case.

(Signed)

(Witnessed)

(Test before an Alderman  
or Justice of the Peace)

(Charge of malpractice in cases of abortion  
one in San Francisco, -  
a lady practitioner involved.)

over



San Francisco,

March 30<sup>th</sup> 1873.

Having been called today to attend

\_\_\_\_\_, in \_\_\_\_\_ street,

I now testify, and place on record,  
that, at the time of my first visit, I  
found her affected with (symptoms of  
threatened, - or actually occurring) abortion;  
the <sup>cause or</sup> causes of which took effect  
before my attendance upon or knowledge  
of the case.

Signed \_\_\_\_\_

Witnessed \_\_\_\_\_

✓

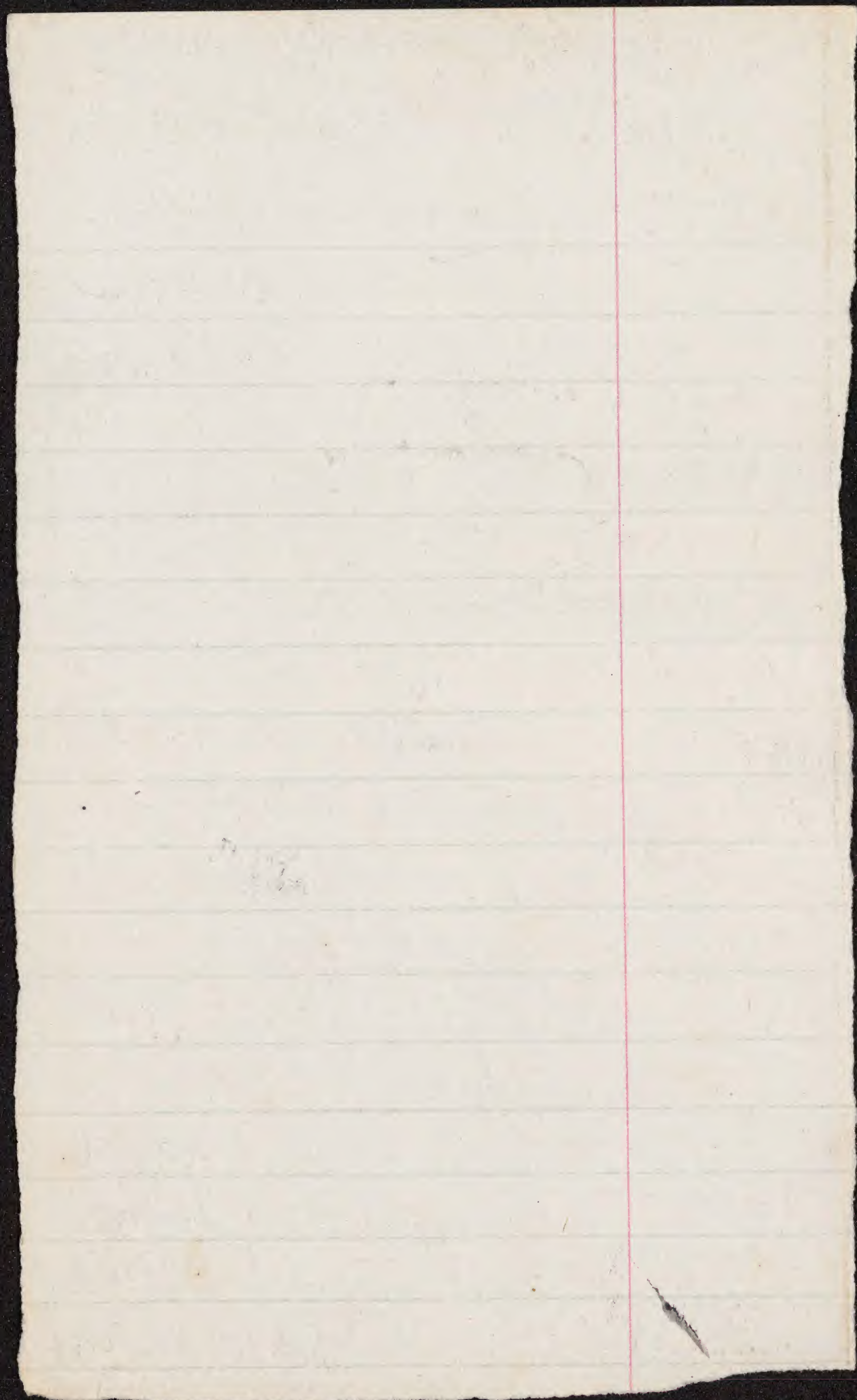
Copy presented to the head of the  
household when the patient resides,  
at the earliest opportunity.



# Life Assurance.

The relations of the physician to Life-insurance are direct and important; although the management of it is, like other insurance, a business, of a mercantile or financial character. It has been by aid of statistics whose facts came immediately <sup>though not exclusively</sup> ~~by~~ under medical observation, that the tables of probability or average expectation of life have been framed, which guide life-assurance in its arrangements. And medical skill must be used in the case of every life that is insured, — to decide whether it is or is not what is called a good life, — i.e., whether the individual has such health and probability of continued health, of long life, as will







make the risk a legitimate one (2  
in the business of the Company.  
The private Physician is frequently  
called upon to give certificates of  
health to his patients, with whose  
past history & present constitution  
he is familiar. And there are  
now numerous offices, all over  
the country, where physicians are  
employed, for moderate remuneration,  
on behalf of the Insurance Companies  
to examine and certify concerning  
the health of applicants.

For such service, diagnostic  
skill is ~~needed~~, such as every physi-  
cian <sup>should endeavor to</sup> ~~needs~~ acquire and cultivate. But  
there are some points to which ~~the~~  
attention needs to be more scrupulously  
directed than is essential in the ordinary



\* Man  
concluded.

5-

th are always more  
tions of the South.  
morning down  
d was with them.  
the North conquered  
it seemed as if  
by this. But it was  
d from the North  
ers, which were  
made them  
Europe. Caesar <sup>was</sup> at last  
h Germans, but they  
h the more civilized  
me when Greece  
the Romans.

10

Asia providential



practice of medicine. The detection (3)  
of the signs of latent or even  
past disease, is necessary; inquiry  
into all that makes disease ~~and~~  
~~the~~ ~~probable~~ probable in the future,  
because of predisposition, hereditary  
or acquired.

We must ascertain, then, in order to  
judge of the degree of risk of a life,  
Several things.

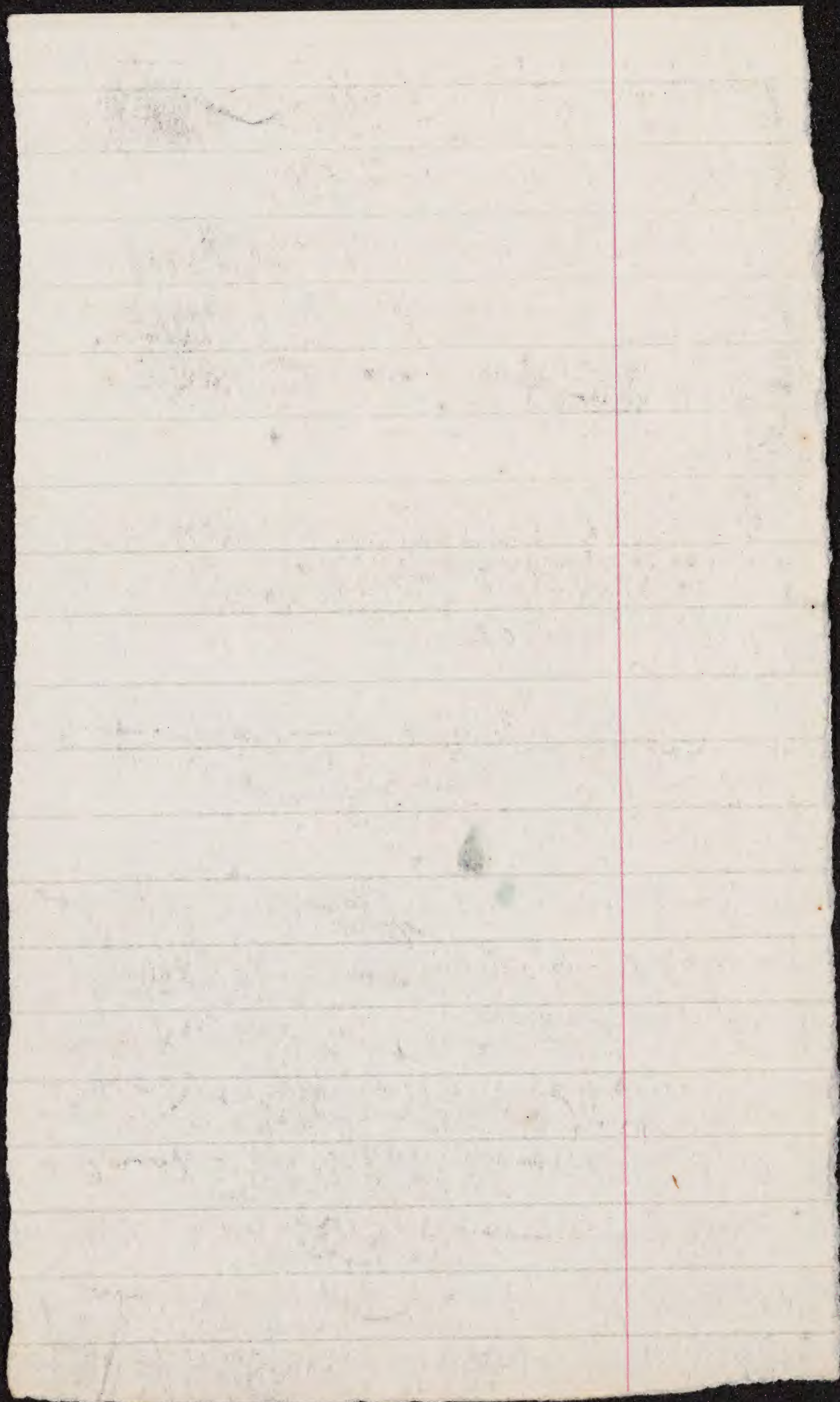
1. the age of the applicant.

2. his other past bodily history, -  
& mental too, as far as possible.

What diseases has <sup>he or</sup> she had, - ordinary  
or unusual - or injuries, by accident  
of disease, especially smallpox, or vaccinia, - fits, asthma, spitting of  
or otherwise blood, rheumatism, gravel, - hernia.

3. The family history: have father mother,  
brother, sister, or other relations had  
consumption, scrofula, insanity, apoplexy,







epilepsy, heart-disease, gout, ~~etc~~ <sup>4</sup>  
Bright's disease, or cancer.

Are the parents of the applicant  
living? If not, at what ages  
did they die, - and of what  
diseases?

4. Occupation: sedentary or  
<sup>the latter is the most favorable.</sup>  
active? What fatigues, risks or  
exposures?

5. Habits, - temperate, - moderate  
drinking, - or abstemious?

6. Pulse; - when quiet for awhile, &  
not nervously excited. Felt rather  
late in the examination, therefore. Count it,  
& estimate its regularity, ~~and~~ force and  
fulness. These points should be recorded.

7. Heart impulse, <sup>heart</sup> sounds, and extent  
of dulness of percussion resonance.  
8. Percussion-resonance of all parts of chest.



produces often  
that is known com-  
to loss of power

uses - phosphor -  
the jaw - action

dist - fine particles  
to injurious of

phosphor Hydro-  
very poisonous,  
ed to it by degrees  
phosphor Hydrogen  
poisonous - mixed  
not so.  
does not much  
too pure for



9. Character of vesicular murmur (5)  
of lungs on auscultation all over  
the chest.

10. Circumference of chest.

11. Respiratory capacity <sup>shown</sup> by the spirometer  
(if at hand). "Vital capacity"?

12. Height, by actual measurement, —  
& weight.

To indicate what are meant by  
bad risks, — which many offices  
decline absolutely, <sup>though</sup> a few accept them  
with specially increased premiums, —  
I may name a few, — not needing of course  
to say anything about obvious organic  
disease in the individual — as consumption,  
vascular disease of the heart, <sup>etc.</sup> which of course  
must make the risk prohibitory.



in the tropics of the Old  
and in the temperate  
Worlds.

V I

Give an account of  
what is its influence

V I I

Give a brief account  
the variations in the  
Coexist with the  
how the law of man  
that of other organs

V I I I

Give three examples,  
on history, of the age  
& Southern Asia &

V I I I I

What has been the  
of that race of men,  
of the United States



Consumption in either parent; - (6)  
or in <sup>any</sup> two members of the immediate  
family; i.e. ~~grand~~ parents, uncles  
& aunts, brothers or sisters.

Insanity in ditto.

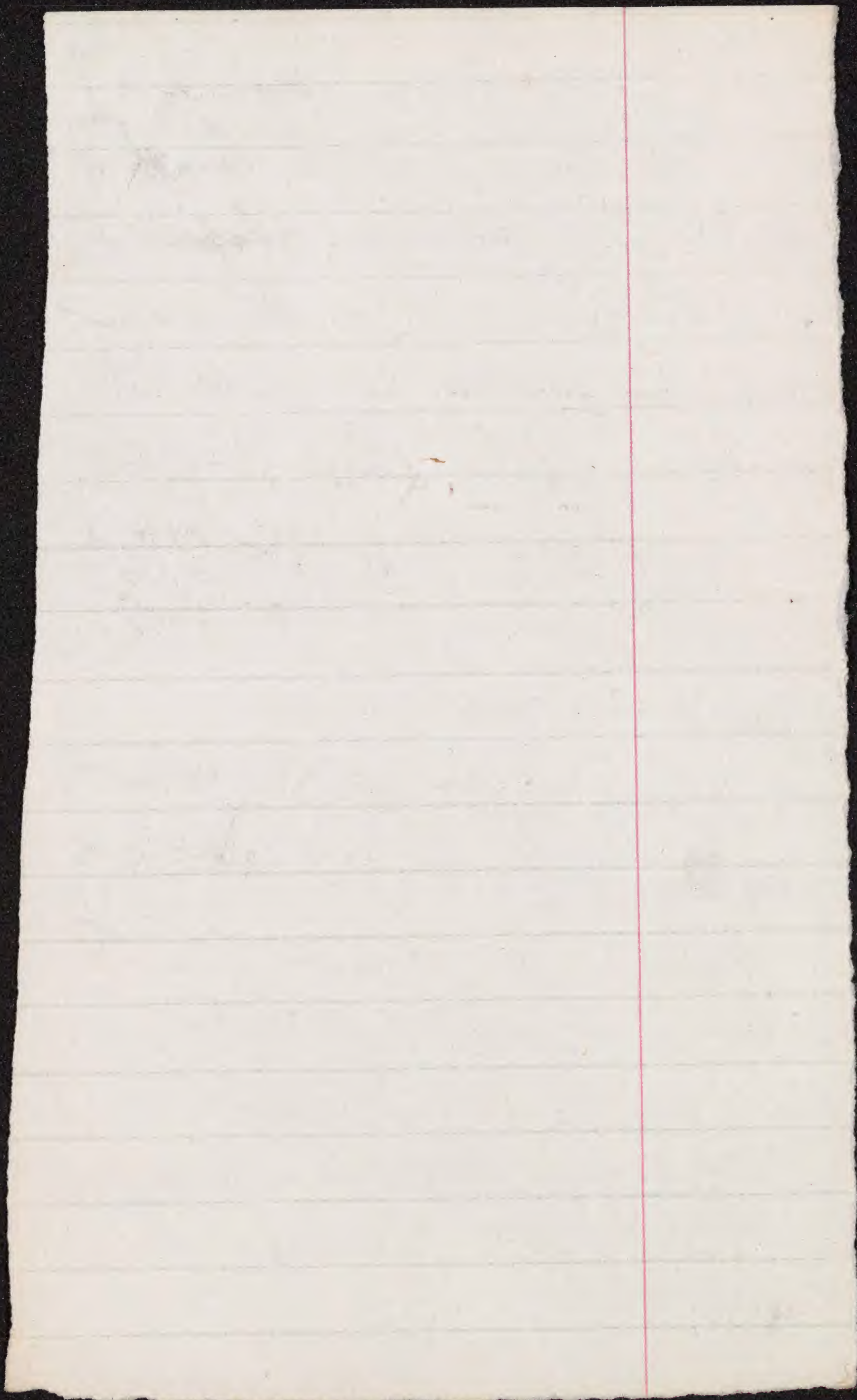
Epilepsy, ditto.

Especially good appearance & health  
history of the individual, with excellent  
habits & <sup>favorable</sup> opportunities for health, may  
mitigate in certain cases the rigor  
of ~~these~~ rules of exclusion.

Not only present intemperance should  
vitiate the probable value of a life, - but  
past habits of drinking, though reformed,  
should <sup>also</sup> be held to do so.

Tavern-keeping lives are not good risks.  
Hemoptysis, at any time of life, renders the  
risk very doubtful. The younger the person







when it occurred — especially (7  
if a female — and the length of  
time since that has elapsed without  
a repetition of it — the more  
room for entertaining the question of  
menstruation, if no physical signs  
or symptoms of pulm. dis. be  
present, — & no hereditary  
tendency <sup>is</sup> shown.

absence of information about  
deceased parents or other near  
relations is unfavorable, & should  
induce special scrutiny into every-  
thing else about the case.

Unusual corpulence is unfavo-  
rable, more than spareness or leanness  
by itself.



in New York  
\* One leading company,  
rejects none but the worst lives,  
grading the premium according  
to the risk. This appears to me  
very reasonable; though requiring  
more skill in the examiners, for  
the benefit of the company, than  
the more usual plan



The <sup>periphery</sup> white ring around the margin of  
(8)  
the cornea, called arcus senilis  
is suspicious — showing ~~the~~ early  
fatty degeneration — which may  
shorten life by involving the  
heart.

~~A single consultation in an  
adult, unless hysterical, is a  
waste of time.~~

Judgment, however, must be  
brought to bear, over and above all  
rules, in estimating the various compli-  
cations of evidence in particular cases,  
in regard to life-insurance. ✕

(Medical Ethics, last lecture.)



migration has  
west. Through  
France, England  
and other countries

9.

Asia was the cradle  
where he had to  
study. Here the germ  
commenced.  
School where his  
trained & where he  
himself & made himself

10







